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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/492,462 | 01/27/2000 | Toru Yamada | 016891/0807 | 9897 |

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EXAMINER

ABDULSELAM, ABBAS L

ART UNIT PAPER NUMBER

2674

DATE MAILED: 12/04/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/492,462

Applicant(s)

Toru Yamada

Examiner

Abbas Abdulsalam

Group Art Unit

2674



☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-19 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-19 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

1. A certified copy of a foreign document has been received.

Claim Rejections 35 U.S.C. 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al.

(USPN 5289293).

Regarding claims 1, 8 and 15, Kato teaches about a picture element density apparatus including an image input interface (1) for inputting image data ; and a pixel density converting units (2, 3) for images which are suitably used for enlargement. See column 1, lines 6-10, column 5, lines 59-68, and column 6, lines 1-20. Kato also teaches selecting unit for selecting the output as well as a control unit (222) which reduces the number of line synchronizing signals based on a given conversion factor. See column 7, lines 45-53. Furthermore, Kato teaches enlargement steps and its determination with respect to a given conversion factor. See Fig 11A. However, kato does not specifically mention about a first black area and a second black area associated with conversion output. Kato does teach about the ratio of black area and a method of increasing the ratio of black area in a converted image. See column, lines 44-51.

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Therefore, it would have been obvious to one having skill in the art at the time the invention was made to utilize Kato's method determining the ratio of the black area in a converted image. One would have been motivated in view of the suggestion in Kato the method of altering the ratio of the black area can be used to determine the desired first and second black areas needed in a second picture data.

Regarding claims 2, 9 and 16, Kato teaches the reduction of lines to one half by reducing the number of lines related to signals which are the output. See Fig 6, and column 8, lines 44-54.

Regarding claims 3, 10 and 17, kato teaches the increase of reduction factor by increasing line buffers and flip-flops. Kato also teaches the line synchronizing signal control unit (302) which reduces the number of line synchronizing signals in accordance with a mode signal. See column 22, lines 46-51, and column 8, lines 32-43.

Regarding claims 12, 14, and 18, Kato teaches an image area determination including for black, n lines and m blocks. See column 20, lines 13-52, and Fig 34 (B-C).

Regarding claim 13, Kato teaches an n-bit comparator (89) performing binerization by comparing the output of register (88) with the output of converted pixel tone. See column 23, lines 24-26.

Regarding claims 4 and 11, Kato teaches a multiplexer (111) which selects the length of the side from horizontal scanning direction enlargement. See column 12, lines 31-38, and Fig 14.

Regarding claims 5 and 19, Kato teaches that the original pixels are thinned out at a fixed ratio in order to reduce the number of original pixels. See column 1, lines 28-39.

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Regarding claims 6-7, Kato teaches above average tones which are directly binarized using a fixed threshold level resulting in loss of thin lines in a converted image. Kato further teaches that the image output device is managed by CPU and half-tone image and binarized image can be separated from each other by the structure of the pattern. See column 18, lines 66-67, column 19, lines 1-9 and Fig 54.

Conclusion

3. The prior art made of record and not relied upon is considered to applicants's disclosure.

The following arts are cited for further reference.

U.S. Pat No. 4,930,021 to Fumihiro

U.S. Pat No. 4,682,243 to Okada

U.S. Pat No. 5,631,710 to Kamogawa et al.

U.S. Pat No. 6,014,121 to Aratani et al.

U.S. Pat No. 6,226,040 to Kuo et al.

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5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abdulsalam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

Any response to this action should be mailed to:

Commissioner of patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand delivered responses should be brought to crustal park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.

Abbas Abdulsalam

Examiner

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XIAO WU
PRIMARY EXAMINER